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EXAMINER

KIM, TAEYOON

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Applicant's amendment and response filed on 7/21/2010 has been received and entered into the case.

Claims 8 and 21-23 are canceled, claims 1-7 have been withdrawn from consideration as being drawn to non-elected subject matter, and claims 9-20 have been considered on the merits. All arguments have been fully considered.

The claim rejection under 35 U.S.C. § 103 has been withdrawn due to the amendment. Applicant's arguments with respect to claims 9-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-13, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Littlepage (US PAT. 3,674,524) in view of Haefner et al. (DE 19536328; IDS ref.).

Littlepage teaches a composition for wood coating comprising glyceride oil such as animal oil or vegetable oil (col. 2, lines 34-43), and also vegetable oil, mineral oil, or waxes are addenda to the composition (col. 3, lines 12-18). The composition of Littlepage is considered as water-insoluble substance.

While Littlepage does not particularly disclose the combination of mineral oils and waxes, vegetable oils and waxes, or animal oils and waxes, it would have been obvious to a

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person of ordinary skill in the art to use any combination of known materials used for wood coating taught by Littlepage.

Littlepage does not teach the covering layer comprising microorganisms having a pigmentation system.

Haefner et al. teach a wood preservative as a form of paint comprising bacteria, particularly *Bacillus subtilis*, which is a pigmented microorganism (see entire document; machine translation of DE1953328).

It would therefore have been obvious for the person of ordinary skill in the art at the time the invention was made to combine the wood preservative comprising *Bacillus subtilis* with the coating composition for preserving and protecting wood as taught by Littlepage.

M.P.E.P. §2144.06 states “It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious).

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While the references do not particularly teach the microorganisms fully covering the base material so as to provide the surface of the base material with a uniform color, the purpose of the teaching by Haefner et al. is to protect the wooden materials, and thus, a person of ordinary skill in the art would apply the microorganism-containing preservatives to cover entire surface of the susceptible surface of the material, and thus it would be covering the base material fully. Furthermore, with known concentration of bacteria and/or spores of bacteria as taught by Haefner et al., it is expected that the paint containing bacteria (i.e. bacillus subtilis) would result in the same effect of a uniform color upon the coating onto the base material.

With regard to the thickness of the water insoluble layer being 1-1000 μm (claim 12) or the microorganism layer being less than about 1000 μm (claim 17), Littlepage in view of Haefner et al. do not teach the limitation.

However, it would have been obvious to modify the thickness to obtain desired thickness for the coating to the wooden materials by routine experimentations. It is well settled that routine optimization is not patentable, even if it results in significant improvements over the prior art. In support of this position, attention is directed to the decision in *In re Aller*, Lacey, and Haft, 105 USPQ 233 (CCPA 1955): Normally, it is to be expected that a change in temperature, or in concentration, or in both, would be an unpatentable modification. Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. *In re Dreyfus*, 22 C.C.P.A. (Patents) 830, 73 F.2d 931, 24 USPQ 52; *In re Waite et al.*, 35 C.C.P.A. (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. *In re*

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Swenson et al., 30 C.C.P.A. (Patents) 809, 132 F.2d 1020, 56 USPQ 372; *In re* Scherl, 33 C.C.P.A. (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. *In re* Sola, 22 C.C.P.A. (Patents) 1313, 77 F.2d 627, 25 USPQ 433; *In re* Normann et al., 32 C.C.P.A. (Patents) 1248, 150 F.2d 708, 66 USPQ 308; *In re* Irmischer, 32 C.C.P.A. (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re* Swain et al., 33 C.C.P.A. (Patents) 1250, 156 F.2d 239, 70 USPQ 412; *Minnesota Mining and Mfg. Co. v. Coe*, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; *Allen et al. v. Coe*, 77 App. D. C. 324, 135 F.2d 11, 57 USPQ 136. (Emphasis added). With regards to determining experimental parameters, such as time in culture, the court has held that "[d]iscovery of optimum value of result effective variable in known process is ordinarily within skill of art (*In re* Boesch and Slaney, 205 USPQ 215 (CCPA 1980)).

The adjustment of particular conventional working conditions (e.g., thickness of coating/paint layer) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan having the cited reference before him/her.

Therefore, the invention as a whole would have been *prima facie* obvious to a person of ordinary skill at the time the invention was made.

Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Littlepage (*supra*) in view of Haefner et al. (*supra*) in further view of Landerer (DE 19841271;

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IDS ref.; machine translation attached).

Littlepage in view of Haefner et al. teach the limitation of claim 9 (see above).

Littlepage in view of Haefner et al. do not teach the water-insoluble substance comprising C4 to C32 saturated or unsaturated fatty acid-ester (claim 14).

Landerer teaches glycerol ester of fatty acids (see entire document of machine-translation).

It would therefore have been obvious for the person of ordinary skill in the art at the time the invention was made to combine the wood preserving composition of Landerer with the teaching of Littlepage in view of Haefner et al. since the purpose of the Landerer's composition is the same as those materials taught by Littlepage and Haefner et al. Thus, the fatty acid-ester composition of Landerer is combined for the same purpose as the coating/preservative materials taught by Littlepage and Haefner et al.

While Landerer do not particularly teach C4 to C32 saturated or unsaturated fatty acid, vegetable oils listed by Landerer are considered to inherently contain fatty acids with C4 to C32, and thus, it is considered that the limitation of C4 to C32 saturated or unsaturated fatty acid ester of the current claim is obvious based on the teaching of Landerer.

Therefore, the invention as a whole would have been prima facie obvious to a person of ordinary skill at the time the invention was made.

Claims 9, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Littlepage (supra) in view of Haefner et al. (supra) in further view of Selvig et al. (of record).

Littlepage in view of Haefner et al. teach the limitation of claim 9 (see above).

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Littlepage in view of Haefner et al. do not teach a growth substrate being present in the microorganism layer, or between the microorganism and the base material (claim 15).

Selvig et al. teach that carbohydrates and/or proteins exuded from the microorganisms and by these extracellular carbohydrates and/or proteins are used for microorganisms to attach and as a constantly renewed supply of organic nutrients that are conducive to growth according (col. 1, lines 40-57). Therefore, it would have been obvious to a person of ordinary skill in the art that carbohydrates and/or proteins would be synthesized and exuded from the microorganism layers.

Therefore, the invention as a whole would have been prima facie obvious to a person of ordinary skill at the time the invention was made.

Allowable Subject Matter

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taeyoon Kim whose telephone number is (571)272-9041. The examiner can normally be reached on 8:00 am - 5:00 pm ET (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Taeyoon Kim/
Primary Examiner, Art Unit 1651